

## PATH DEPENDENCY AND ORGANIZATION CHANGE

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### ABSTRACT

This paper explains why firms have difficulties to implement management practices with the lens of path dependency theory (PDT). PDT assumes that past decisions restrain present and future choices. This paper explains the three stages of path dependency: increasing selectivity, positive feedbacks, and path dependence. Furthermore, this paper suggests how organizations overcome their path dependence while implementing and adopting management practices.

**KEYWORDS:** Path Dependence, Organizational Change, and Organizational Practices

### INTRODUCTION

Most companies recognize the great importance and high effectiveness of new management practices. For example, Job Characteristics Theory (Hackman & Oldham, 1980), empirically showed that job characteristics had significant impacts on motivation, job performance, job satisfaction, and has reduced absenteeism and turnover rates. High performance work systems also indicated that organizations would gain significant competitive advantages by putting together the right human resource management systems (Huselid, 1995). In addition, popular business magazines are touting the effectiveness of such management practices by covering the success stories of Southwest Airlines, SAS, Wal-Mart and GE. As a consequence, many companies continue to adopt management practices to gain superior performance over their competitors.

However, in reality, only a few such firms have actually enjoyed competitive advantages from the adoption of management practices. Why do most companies fail to successfully implement management systems? This paper explains why firms have difficulties to implement management practices with the lens of path dependency theory. Furthermore, this paper suggests possible ways to overcome the path dependence of the firms while implementing management practices.

### THREE PARABLES

An online music download company adopted self-management team practices to encourage their employees to take responsibility and be autonomous to their tasks. The firm changed the nature of work to increase reciprocal interdependence among team members, embraced a skill-based and team-based pay system, empowered teams to make decisions about their tasks, and involved them in peer evaluations. In addition, top management provided full attention and resources to support this new management practices. However, the company had to abandon eventually them due to the severe resistance from its unions and middle managers.

An automobile company hired a prestigious professor who was a guru of job enrichment. To compete with ambitious foreign auto companies based on low cost and competitive quality, it chose to transform the nature of job through work redesign. First of all, it administered diagnostic tests to evaluate the nature of current jobs, to detect problems of current systems, and to assess the employee attitudes toward their work. After appraising the whole process, the professor advised top executives that it was essential to reform the production sequence and processes in order to give

enriched jobs to employees. Such changes in the production processes would have required the rearrangement of machines and adoption of new technology. Unfortunately, this company had purchased almost 1 billion dollars' worth of new robots to aid with the automation of manufacturing the previous year. The restructuring of production processes might make these new robots obsolete. After long discussions with board of directors, the C.E.O. of this company informed the professor that management had decided to nullify the professor's suggested changes.

The executive of a major software company was worried about her company's falling revenues and market shares. To remedy this, first, she used solutions that had been used to solve similar problems in the past, such as providing contingent incentive plans, hiring talented software programmers from competitors, and asking for recommendations from consultants. After implementing these practices, she found that circumstances did not change, but actually worsened. She could not understand why solutions that had worked in the past were no longer effective and why her firm continued to lose its competitiveness even though there were no fatal errors or dysfunction in current management systems.

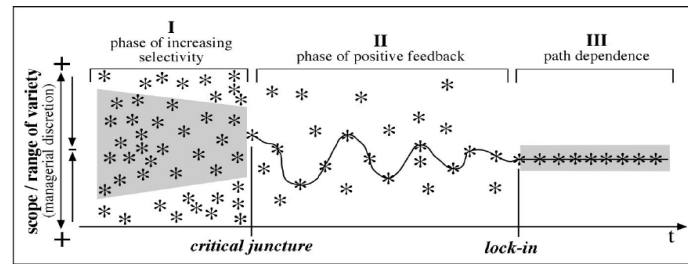
The above three examples represent common problems that companies have faced when trying to pursue organizational change (OC), which involves adopting new management practices or reforming old ones. Possible factors contributing to such problems can vary, including organization culture, lack of resources or leadership, and mistrust between employees and employers (Aldrich, 1986; Boeker, 1997; Pettigrew, 1985). As a complementary perspective to these explanations, this paper adopts path dependency theory to explain the challenges of pursuing organizational changes by adopting new management practices.

## **PATH DEPENDENCY THEORY**

Even though the theory of path dependency originated in economics through the work of Paul David (1985), it was adopted to understand organization dynamics by behavioral scientists (Hanna & Freeman, 1984; Tripasas & Chia, 2002). One of the core concepts of path dependency theory (PDT) is that of the legacy of history. PDT assumes that past decisions restrain present and future choices (Sydow, Schreyögg, & Koch, 2009). For instance, the past decision of the auto company to equip new robots in the first case study constrains present strategic options to embrace the recommended job enrichment program. Also, in the example of the online music download company, the past aggressive relationship the online music download company had with its labor union impedes its move to encourage self management practices.

Figure 1 describes three stages of PDT. The initial decisions entail more diverse choices and more flexibility than subsequent decisions based on previous choices. As firms make successive decisions after their initial choices through the expenditure of more time and energy, they eventually become committed and subject to their previous actions. This moment of setting the path dependency is called as "critical juncture" (Collier & Collier, 1991). Thus, over time, the scope of choices available to firms in such situations gradually abates, whether companies are aware of this or not.

When initial decisions result in positive feedback, self reinforcing dynamics start becoming apparent in organizations (Sydow et al., 2009). Stimulated by the positive returns or rewards of their original choices, firms put more confidence and credibility into the initial decision. By making subsequent choices and repeating similar actions as they did in their initial decision, firms might reap more positive outcomes such as learning and increases in productivity and performance. Furthermore, the desires of organizations to have reliability and accountability for their systems have led them to standardize structures that are reproducible and stable over time (Kelly & Amburgey, 1991).



Source: Adapted from an original in Sydow et al. (2009)

**Figure 1: Constitution of an Organization Path**

Organizational members can get used to the advantages of institutionalized structures such as stability, reproducibility, and convenience. As a result, when old systems have to be replaced by emerging new systems, people generate strong resistance against such changes and try to maintain the status quo, leading to organizational inertia (Hanna & Freeman, 1984). For example, the executive of the software company from the example described in the previous sections simply made use of previous solutions to deal with current problems because they had succeeded in the past (self-reinforcing effects). Moreover, when middle managers in the first case study found that employers had a plan to apply self-managed team to its workplaces, they perceived the new system as a threat to the status quo. Middle managers recognized that self-managed teams might take over their current responsibilities and duties of controlling and monitoring workers. Self-managed teams also would have required middle managers to perform totally new roles such as coach, coordinator, and team liaison. Clearly, the positive rewards of initial decisions generate self-reinforcing dynamics. Standardized and established structures and practices created by this self-reinforcing effects stand against the organizational change.

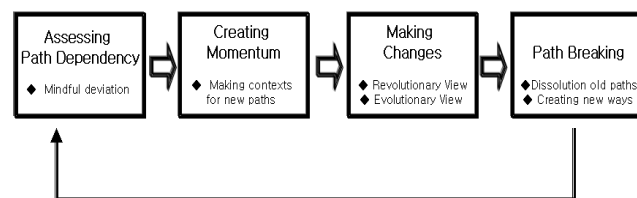
The carry-over effects of history limit the scope of choices of organizations and self-reinforcing effects institutionalize systematic patterns of organizational behaviors. As a result, their previously determined patterns of choices create inflexibility to future choices. This kind of a situation is called a “lock-in” (David, 1985). In a lock-in situation, even though organizations seem to select optimal choices among various options, their choice is actually set in deterministic patterns (Mahoney, 2000). Furthermore, the perspectives of organizations become obsessed with present paradigms. For instance, the executive of the software company as described in the previous case study was trapped by previous success. She could not determine the cause of her company’s productivity problems due to her myopic view. As a result, the organization might lose its capability to cope with a complex and changing environment (Sydow et al., 2009).

### Myths of Path Dependency Theory

PDT explains the fundamental reasons it is so hard to change organizations. It is true that most organizations, which have a significant history, are influenced by PDT to certain degrees. However, PDT seems to be a static and deterministic view, excluding the possibility for organizational change. According to the extreme view of PDT, organizations are constrained by their past and are hard to make innovative or dramatic changes beyond what they have done in the past. In terms of this perspective, we cannot explain how Japanese companies, which were devastated by World War II, gained competitive advantage over companies from other countries which had favorable past performance histories. Furthermore, PDT cannot explain why the big three U.S. auto companies, which had had glorious history in the past, are going through painful downsizing and shutting down their factories.

However, such interpretations result from the misinterpretation of PDT. Path dependency does not refer to the final situation or the end of game, regardless of experienced inertia and persistence. Sydow et al. says (2005) “Lock-in is the social situation in which an individual actor or a group of actors have lost (at least partly) their power to choose among

alternatives because a path reproduces a certain pattern of decisional behaviors.” If actors restore their decision power and break pattern of actions, they can unlock and even create new paths. Therefore, the economic miracle of Japanese companies might be explained by path dissolution through the creation of innovative management practices, including quality circles, lean systems, and total quality systems. The crisis of the Big 3 might be explained by a lock-in situation, in which flexibility was lost, and the old paradigm of the past was unaltered. It could be said that organizations might be trapped in lock-in situations, but do have discretion to change that these situations. The next section in this paper will focus on how organizations can unlock their old paths and create new paths. Figure 2 illustrates the processes of breaking and creating organizational paths.



**Figure 2: Breaking and Creating Organizational Paths**

### **How to Break Path Dependency Assess Path Dependency**

First of all, organizations should be aware of their current path dependence status in order to unlock their paths. Before reaching lock-in or even in lock-in status, firms might reap positive feedbacks from their current paths. In addition, some of current paths might be critical components of their competitive advantages. Nevertheless, every path has potential to lead organizations to lock-in situations. Paths seduce them to establish deterministic patterns. Unfortunately, the cost of lock-in and structural inertia is very expensive in the competitive and dynamic environment. Organizations must be fluid and flexible enough to successfully respond to the constantly changing needs of markets and customers. As explained earlier, lock-in situations decrease the scope of alternatives and flexibility of companies. Moreover, the longer organizations stay on one path, the greater the resistance and inertia towards changes is created. Therefore, it is essential for organizations to recognize their deterministic patterns as early as possible in order to minimize the negative effects of path dependence. However, this assessment is only possible when organizations recognize that existing structures may create inefficiencies in the present and deviation from current paths are required to create new futures (Garud & Karnoe, 2001). They define this process, which assesses and challenges path dependency, as “mindful deviation”.

### **Create Critical Momentum**

The dissolution of paths demands critical momentum. That refers to the point when moving force is greater than the force of inertia. Reaching momentum requires valuable resources from organizations. Therefore, organizations should build common understandings and norms among their members in order to acquire necessary resources and eventually use them as generators of moving force. In addition, the magnitude of such momentum should be significant enough to overcome the resistance of old paths (Garud & Karnoe, 2001). Picture a huge, heavy flywheel. Now imagine that your task is to get the flywheel rotating on the axle. The great mass of the flywheel does not move at all despite of your effort. A few hours later, you finally realize that you cannot move the flywheel by yourself. So you call your close friends and explain to them why you need to move this flywheel, and why you need their help. Now you and your friends push together. Finally, you get the flywheel to move forward! <sup>1</sup> The momentum of new paths begins with this first movement of the flywheel. However, this momentum does not mean that organizations have already succeeded in building new paths.

The momentum only means that they have obtained the initial steps for new paths and they need to continuously move their organization to move forward.

### Make Evolutionary Organization Change

Previous literature argued that organizational change must be implemented rapidly to break the current paths (e.g., (Miller & Frisen, 1984; Romanelli & Tushman, 1994). This position assumes that all elements of an organization should be changed simultaneously (Amis, Slack, & Hinings, 2004). Rapid change is essential for creating a new path for organization because it can create critical momentum in which all parts of an organization pull together in a common direction (Amis et al., 2004). Furthermore, radical transformation reduces resistance among organizational members who feel that their power is threatened by reorientation (Tushman & Romanelli, 1985).

However, this revolutionary view on organizational change has some limitations. First, this whole notion of sharp bursts of change requires a lot of a firm's valuable resources. Revolutionary transition is based on the wide simultaneous changes across all organizational elements. Firms should spend substantial time, resources, and attention to pursue revolutionary change process over all organizations. Dramatic change through the entire organization increases complexity for coordination and conflicts among functional departments, which might pursue their own interests.

Second, radical changes make it hard for organizations to obtain consensus from their key stakeholders. To sustain and accelerate momentum for new paths, it is essential to draw support and participation of internal and external members who provide resources and make efforts for the new paths. However, strong pressures for rapid transitions might galvanize greater resistance from actors who cannot see a clear link between their interest and the proposed reorientation. According to Amis et al. (2004: 16), "rapid change across entire organizations is not only insufficient to bring about radical change, but may even be detrimental to its outcome". In addition, they find that the initial bursts of change in activity are followed by relatively slow progress toward the end point.

In contrast to revolutionary change, evolutionary change emphasizes an incremental and concentrated process. Proponents of evolutionary change focus on high impact elements (Hinings & Greenwood, 1988; Kanter, 1983), which have an important functional and symbolic role in organizations. The change in high impact elements sends actors a clear message that changes are being implemented (Amis et al., 2004). In addition, incremental processes may draw consent and participation from actors by giving them space and time to internalize new systems. The internalization of actors will sustain the consistency of changing activity across whole processes. However, if organizations are not committed to create new paths in consistent and persistent ways and do not make such transitions in their core functions, gradual transitions might fail to create the required momentum to overcome inertia. Ultimately, this may result in the occurrence of limited peripheral and piecemeal changes. Therefore, it is essential for organizations to have explicit long term strategic plans about new paths and to adhere to them when they pursue the evolutionary approach. Table 1 summarizes the strengths and weaknesses of evolutionary view and evolutionary view on organization change.

**Table 1: Comparison between Revolutionary and Evolutionary View on Organization Change**

Revolutionary View		Evolutionary View	
Strengths	Weaknesses	Strengths	Weaknesses
Creating synergy preventing resistance against change simultaneous changes across all organizations	Requiring substantial resources the lack of consent from stakeholders inconsistent change processes	Saving resources focusing on high impact elements consistent change process drawing consent from stakeholders	Failing to create momentum resulting in peripheral changes

### Watch Out for the Next Wave of Path Dependency

Organizations are on new paths and will reap the fruits of their new practices. For example, the successful implementation of job enrichment programs in organizations can help increase the job satisfaction and motivation of their employees. Self-managed teams can generate creative ideas and improve production processes. Motivated by positive outcomes, companies will expand the scope of new practices to increase positive outcomes through pouring out more resources. Top management, impressed by substantial outcomes, can strengthen the credibility of these innovative organizational practices. Does this procedure sound familiar? Yes, it is exactly the same process for the formulation of path dependency. Every new path has the potential to lock organizations in, to a certain degree. Therefore, organizations should be mindful of deviating toward new paths and be prepared to create momentum for other paths while enjoying favorable outcomes. Such continuous efforts will keep organizations fluid and flexible.

### CONCLUSIONS

Change is not a choice, but a compulsory requirement for companies, which are in the dynamic business environment. PDT (Path Dependency Theory) does not explain all of the complicated dynamics and variances of organizational change. It also does not devalue the usefulness of other explanations of organization change such as the role of leadership, organizational culture, and resource based theory. The influence of PDT also varies when taking into account firm size, the length of the firm's history, the sequence of change in the firm, and the capability of organizational learning. Nevertheless, it provides clear explanations as to why it is so hard for firms to adopt new practices and perspectives. In addition, PDT can help in understanding how firms can overcome old deterministic patterns and create new paths. It can eventually help organizations to become more mobile and flexible. Organizations cannot be free from their past. However, they must not be held back by their history either. They have to rely on their power and capability to open new paths in the future. Learning from the past and recognizing the importance of the present will determine their future.

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